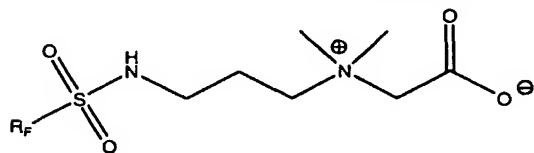


**CLAIMS**

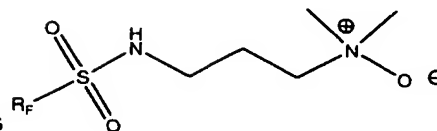
What is claimed is:

1. An Aqueous Film Forming Foam formulation comprising  $R_F$ - $Q_s$ , wherein:  
 $R_F$  has a greater affinity for a first part of a system having at least two parts than  $Q_s$ ;  
 $Q_s$  has a greater affinity for a second part of the system than  $R_F$ ; and  
 $R_F$  comprises at least two  $-CF_3$  groups and at least two hydrogens.
2. The formulation of claim 1 wherein  $R_F$  is hydrophobic relative to  $Q_s$ .
3. The formulation of claim 1 wherein  $Q_s$  is hydrophilic relative to  $R_F$ .
4. The formulation of claim 1 wherein  $R_F$  is hydrophobic and  $Q_s$  is hydrophilic.
5. The formulation of claim 1 wherein  $R_F$  comprises at least one  $-CH_2-$  group.
6. The formulation of claim 1 wherein  $R_F$  comprises at least one cyclic group.
7. The formulation of claim 6 wherein the cyclic group comprises an aromatic group.
8. The formulation of claim 1 wherein  $R_F$  comprises at least one  $(CF_3)_2CF-$  group.
9. The formulation of claim 1 wherein  $R_F$  comprises at least three  $-CF_3$  groups.
10. The formulation of claim 1 wherein  $R_F$  comprises at least two  $(CF_3)_2CF-$  groups.
11. The formulation of claim 1 wherein  $R_F$  comprises at least four carbons and one of the four carbons comprises a  $-CH_2-$  group.

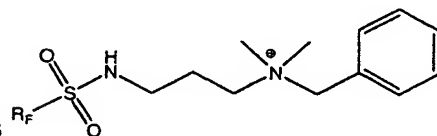
12. The formulation of claim 1 wherein  $R_F$ - $Q_s$  is



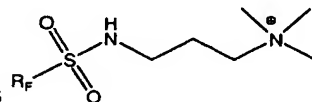
13. The formulation of claim 1 wherein  $R_F-Q_s$  is



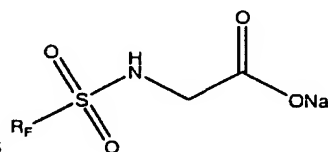
14. The formulation of claim 1 wherein  $R_F-Q_s$  is



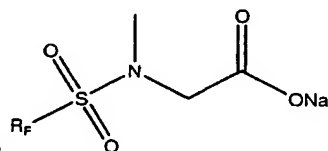
15. The formulation of claim 1 wherein  $R_F-Q_s$  is



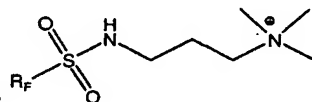
16. The formulation of claim 1 wherein  $R_F-Q_s$  is



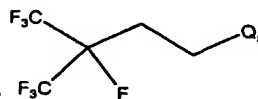
17. The formulation of claim 1 wherein  $R_F-Q_s$  is



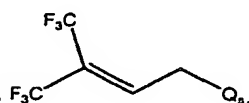
18. The formulation of claim 1 wherein  $R_F-Q_s$  is



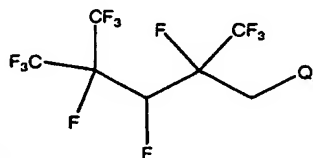
19. The formulation of claim 1 wherein  $R_F-Q_s$  is



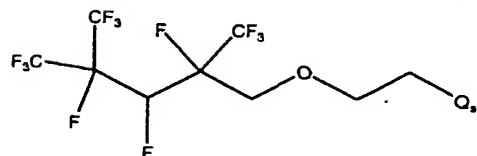
20. The formulation of claim 1 wherein  $R_F-Q_s$  is



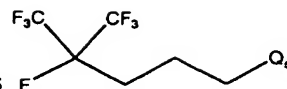
21. The formulation of claim 1 wherein  $R_F-Q_s$  is



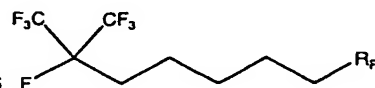
22. The formulation of claim 1 wherein  $R_F-Q_s$  is



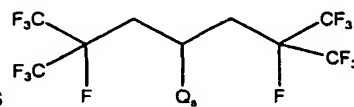
23. The formulation of claim 1 wherein  $R_F-Q_s$  is



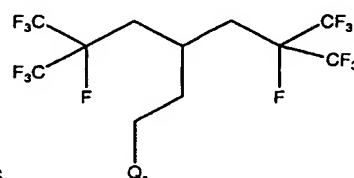
24. The formulation of claim 1 wherein  $R_F-Q_s$  is



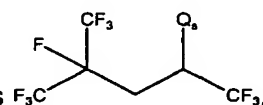
25. The formulation of claim 1 wherein  $R_F-Q_s$  is



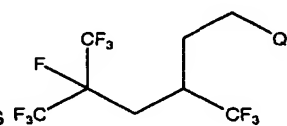
26. The formulation of claim 1 wherein  $R_F-Q_s$  is



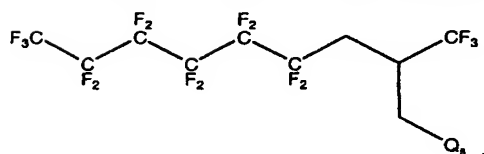
27. The formulation of claim 1 wherein  $R_F-Q_s$  is



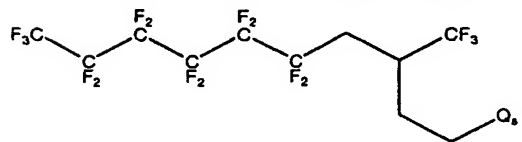
28. The formulation of claim 1 wherein  $R_F-Q_s$  is



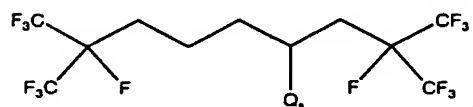
29. The formulation of claim 1 wherein  $R_F-Q_s$  is

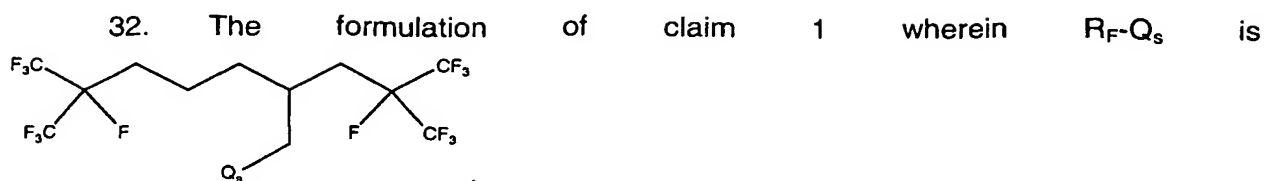


30. The formulation of claim 1 wherein  $R_F-Q_s$  is

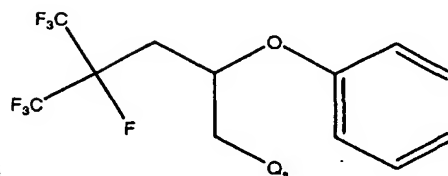


31. The formulation of claim 1 wherein  $R_F-Q_s$  is

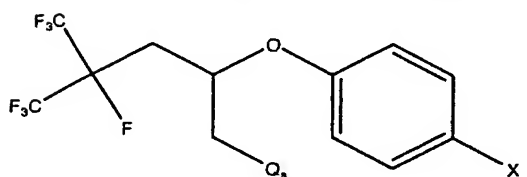




33. The formulation of claim 1 wherein  $R_F-Q_s$  is



34. The formulation of claim 1 wherein  $R_F-Q_s$  is



35. A process for providing an Aqueous Film Forming Foam formulation to a substrate, the Aqueous Film Forming Foam formulation comprising  $R_F-Q_s$ , wherein:  
 $R_F$  has a greater affinity for a first part of a system having at least two parts than  $Q_s$ ;  
 $Q_s$  has a greater affinity for a second part of the system than  $R_F$ ; and  
 $R_F$  comprises at least two  $-CF_3$  groups and at least two hydrogens.

36. The process of claim 35 wherein  $R_F$  is hydrophobic relative to  $Q_s$ .

37. The process of claim 35 wherein  $Q_s$  is hydrophilic relative to  $R_F$ .

38. The process of claim 35 wherein  $R_F$  is hydrophobic and  $Q_s$  is hydrophilic.

39. The process of claim 35 wherein the substrate comprises a liquid.

40. The process of claim 35 wherein the substrate is a part of the system.

41. The process of claim 35 wherein  $R_F$  comprises at least one  $-CH_2-$  group.

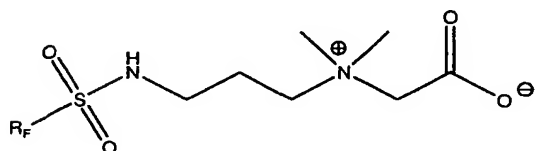
42. The process of claim 35 wherein  $R_F$  comprises at least one cyclic group.

43. The process of claim 42 wherein the cyclic group comprises an aromatic group.

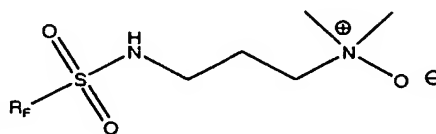
44. The process of claim 35 wherein  $R_F$  comprises at least one  $(CF_3)_2CF-$  group.

45. The process of claim 35 wherein  $R_F$  comprises at least three  $-CF_3$  groups.
46. The process of claim 35 wherein  $R_F$  comprises at least two  $(CF_3)_2CF-$  groups.
47. The process of claim 35 wherein  $R_F$  comprises at least four carbons and one of the four carbons comprises a  $-CH_2-$  group.

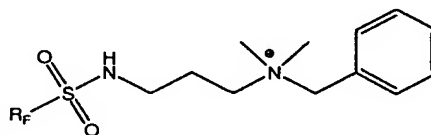
5 48. The process of claim 35 wherein  $R_F-Q_s$  is



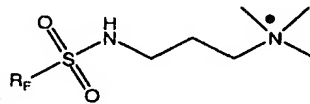
49. The process of claim 35 wherein  $R_F-Q_s$  is



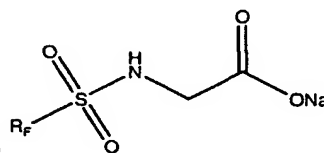
50. The process of claim 35 wherein  $R_F-Q_s$  is



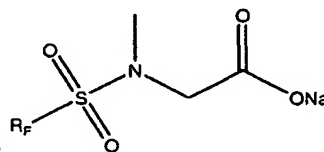
51. The process of claim 35 wherein  $R_F-Q_s$  is



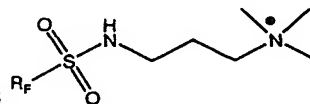
10 52. The process of claim 35 wherein  $R_F-Q_s$  is



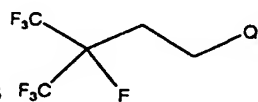
53. The process of claim 35 wherein  $R_F-Q_s$  is



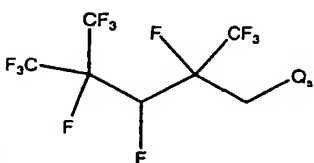
54. The process of claim 35 wherein  $R_F-Q_s$  is

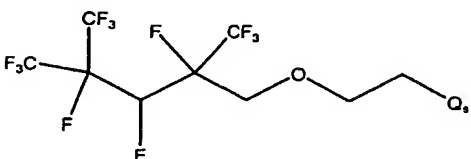


55. The process of claim 35 wherein  $R_F-Q_s$  is



56. The process of claim 35 wherein  $R_F-Q_s$  is 

57. The process of claim 35 wherein  $R_F-Q_s$  is 

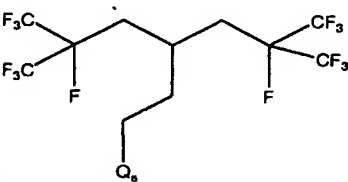
58. The process of claim 35 wherein  $R_F-Q_s$  is 

59. The process of claim 35 wherein  $R_F-Q_s$  is 

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60. The process of claim 35 wherein  $R_F-Q_s$  is 

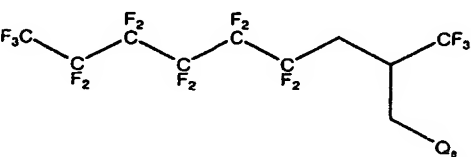
61. The process of claim 35 wherein  $R_F-Q_s$  is 

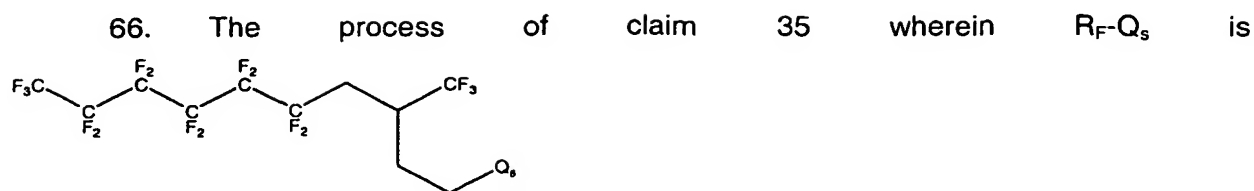
62. The process of claim 35 wherein  $R_F-Q_s$  is 

63. The process of claim 35 wherein  $R_F-Q_s$  is 

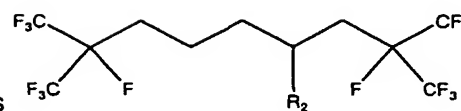
64. The process of claim 35 wherein  $R_F-Q_s$  is 

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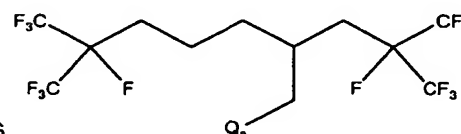
65. The process of claim 35 wherein  $R_F-Q_s$  is 



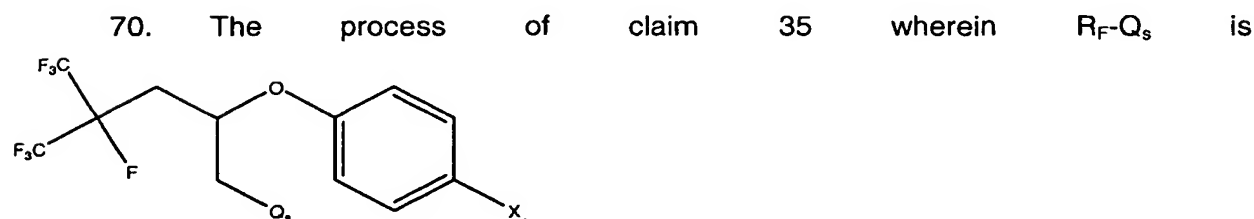
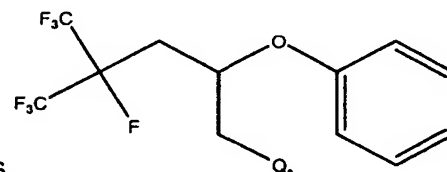
67. The process of claim 35 wherein  $R_F-Q_s$  is



68. The process of claim 35 wherein  $R_F-Q_s$  is



5 69. The process of claim 35 wherein  $R_F-Q_s$  is



71. A foam stabilizer comprising  $R_F-Q_{FS}$ , wherein  $R_F$  is hydrophobic relative to  $Q_{FS}$ ,  $R_F$  comprising at least two  $-CF_3$  groups and at least two hydrogens.

10 72. The stabilizer of claim 71 wherein  $R_F$  comprises at least one  $-CH_2-$  group.

73. The stabilizer of claim 71 wherein  $R_F$  comprises at least one cyclic group.

74. The stabilizer of claim 73 wherein the cyclic group comprises an aromatic group.

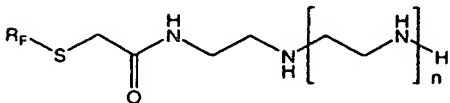
75. The stabilizer of claim 71 wherein  $R_F$  comprises at least one  $(CF_3)_2CF-$  group.

15 76. The stabilizer of claim 71 wherein  $R_F$  comprises at least three  $-CF_3$  groups.

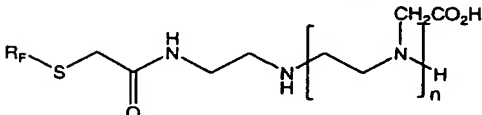
77. The stabilizer of claim 71 wherein  $R_F$  comprises at least two  $(CF_3)_2CF-$  groups.

78. The stabilizer of claim 71 wherein  $R_F$  comprises at least four carbons and one of the four carbons comprises a  $-\text{CH}_2-$  group.

79. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



5 80. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



81. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



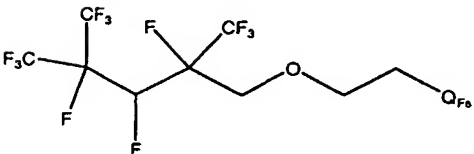
82. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



83. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



10 84. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



85. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



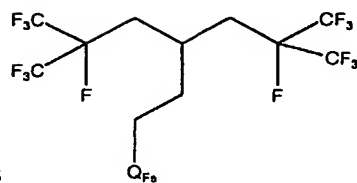
86. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



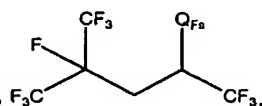
87. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



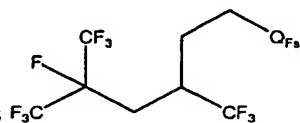




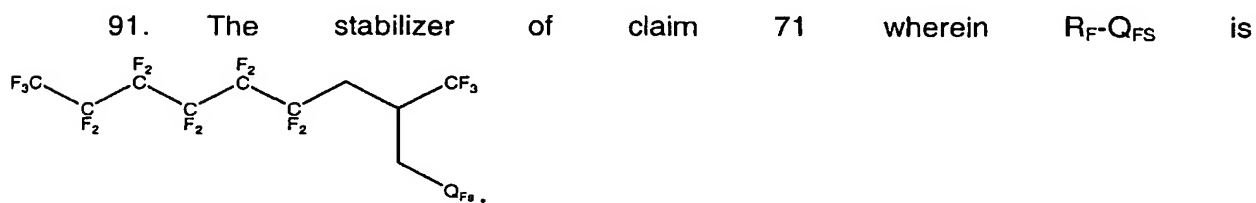
88. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



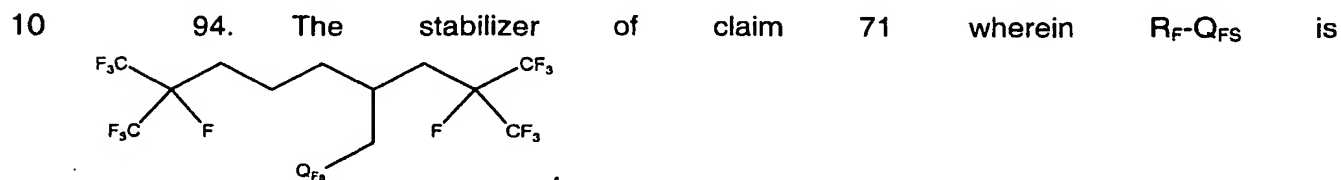
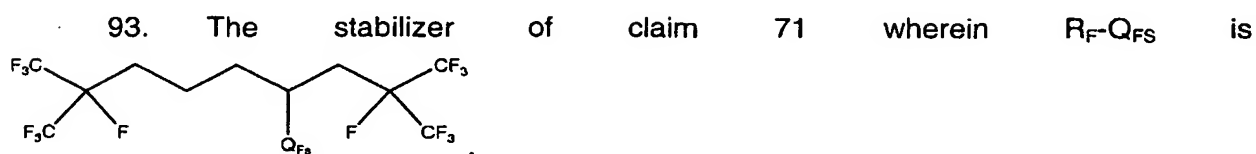
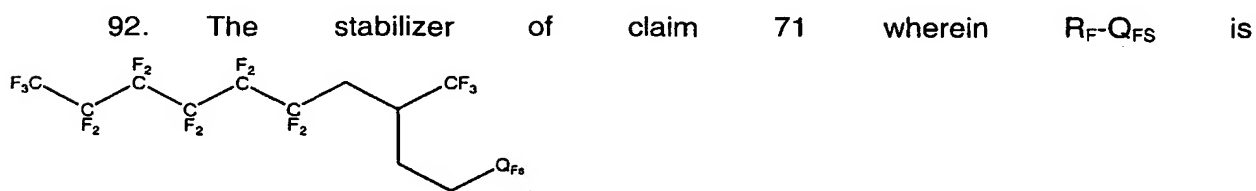
89. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



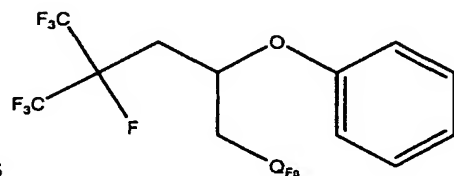
90. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is



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95. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is

96. The stabilizer of claim 71 wherein  $R_F-Q_{FS}$  is

